Supplementary Materials

Table S1. Differential proteins in the secretory and proliferative phase (unadjusted p-values)

SECRETORY MENSTRUAL PHASE						
Protein abbreviation	**Protein Full Name**	**Uniprot ID**	**logFC**	**FC**	**p-value**	**adj.p-val**
PDCD1	Programmed cell death protein 1	Q15116	-0.89	0.539614	0.00099	0.15
BDNF	Brain-derived neurotrophic factor	P23560	-0.78	0.582367	0.00054	0.15
P2Y12	P2Y purinoceptor 12	Q9H244	-0.75	0.594604	0.0063	0.28
B3GA1	Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 1	Q9P2W7	-0.75	0.594604	0.0047	0.24
CRP	C-reactive protein	P02741	-0.75	0.594604	0.028	0.62
CH3L1	Chitinase-3-like protein 1	P36222	-0.75	0.594604	0.0042	0.24
MELPH	Melanophilin, MLPH	Q9BV36	-0.72	0.607097	0.00061	0.15
CD33	Myeloid cell surface antigen CD33	P20138	-0.71	0.61132	0.0027	0.19
CRLF2	Cytokine receptor-like factor 2	Q9HC73	-0.7	0.615572	0.0028	0.19
MLP3B	Microtubule-associated proteins 1A/1B light chain 3B	Q9GZQ8	-0.7	0.615572	0.0023	0.19
GLPA	Glycophorin-A	P02724	-0.69	0.619854	0.0019	0.19
PLGF	Placenta growth factor	P49763	-0.68	0.624165	0.16	0.92
CEAM5	Carcinoembryonic antigen-related cell adhesion molecule 5	P06731	-0.67	0.628507	0.0017	0.19
PYRG1	CTP synthase 1	P17812	-0.66	0.632878	0.0026	0.19
RBM3	RNA-binding protein 3	P98179	-0.65	0.63728	0.0019	0.19
PTEN	Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN	P60484	-0.65	0.63728	0.0021	0.19
TSN16	Tetraspanin-16	Q9UKR8	-0.65	0.63728	0.0013	0.15
LYAM3	P-selectin	P16109	-0.65	0.63728	0.008	0.34
IL18	Interleukin-18	Q14116	-0.65	0.63728	0.00074	0.15
IFIT2	Interferon-induced protein with tetratricopeptide repeats 2	P09913	-0.65	0.63728	0.003	0.19
RRAGC	Ras-related GTP-binding protein C	Q9HB90	-0.64	0.641713	0.00044	0.15
DHRS2	Dehydrogenase/reductase SDR family member 2, mitochondrial	Q13268	-0.64	0.641713	0.00023	0.15
MMP1	Interstitial collagenase	P03956	-0.64	0.641713	0.0004	0.15
CEAM1	Carcinoembryonic antigen-related cell adhesion molecule 1	P13688	-0.63	0.646176	0.027	0.62
TNFB	Lymphotoxin-alpha	P01374	-0.63	0.646176	0.0041	0.24
SPA9	Serpin A9	Q86WD7	-0.63	0.646176	0.015	0.45
TMM54	Transmembrane protein 54	Q969K7	-0.62	0.650671	0.0002	0.15
ID3	DNA-binding protein inhibitor ID-3	Q02535	-0.62	0.650671	0.0028	0.19
MAD4	Max dimerization protein 4	Q14582	-0.62	0.650671	0.0024	0.19
PRTN3	Myeloblastin	P24158	-0.62	0.650671	0.0049	0.24
IL10	Interleukin-10	P22301	-0.61	0.655197	0.028	0.62
MK12	Mitogen-activated protein kinase 12	P53778	-0.61	0.655197	0.00078	0.15
NFAC4	Nuclear factor of activated T-cells, cytoplasmic 4	Q14934	-0.61	0.655197	0.019	0.52
IFNA1	Interferon alpha-1/13	P01562	-0.61	0.655197	0.0013	0.15

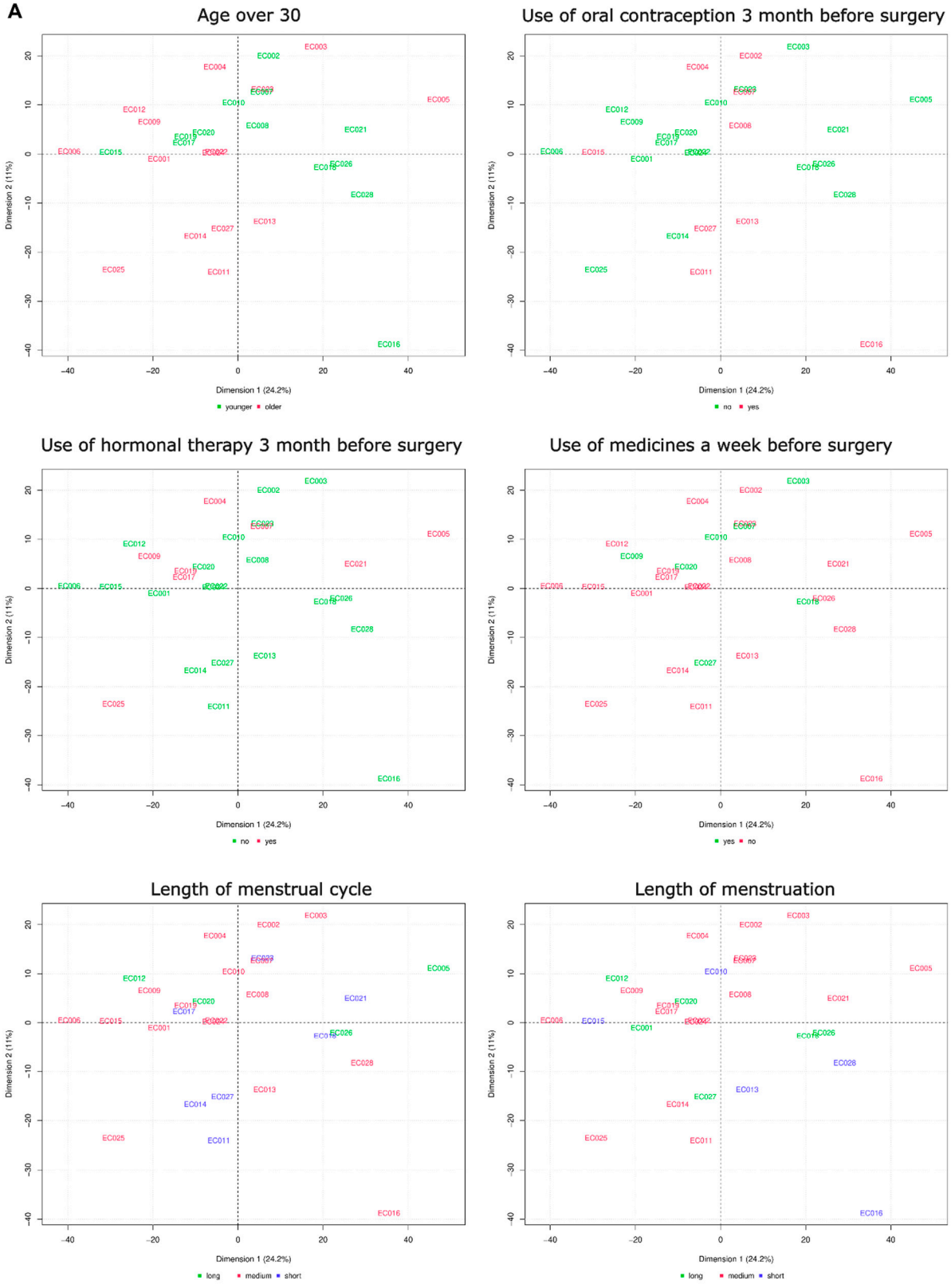
SDC1	Syndecan-1	P18827	-0.61	0.655197	0.013	0.44
CCL7	C-C motif chemokine 7	P80098	-0.61	0.655197	0.026	0.62
FABPI	Fatty acid-binding protein, intestinal	P12104	-0.61	0.655197	0.0062	0.28
AKA12	A-kinase anchor protein 12	Q02952	-0.6	0.659754	0.003	0.19
CCL11	Eotaxin	P51671	-0.59	0.664343	0.00084	0.15
KI67	Proliferation marker protein Ki-67	P46013	-0.59	0.664343	0.04	0.75
GAS6	Growth arrest-specific protein 6	Q14393	-0.59	0.664343	0.015	0.45
MRPP3	Mitochondrial ribonuclease P catalytic subunit	O15091	-0.58	0.668964	0.019	0.52
AREG	Amphiregulin	P15514	-0.57	0.673617	0.00064	0.15
MICA	MHC class I polypeptide-related sequence A	Q29983	-0.57	0.673617	0.028	0.62
TR11B	Tumor necrosis factor receptor superfamily member 11B	O00300	-0.55	0.68302	0.028	0.62
CD15	/	/	-0.55	0.68302	0.017	0.5
K2C8	Keratin, type II cytoskeletal 8	P05787	-0.55	0.68302	0.0012	0.15
ULBP1	UL16-binding protein 1	Q9BZM6	-0.53	0.692555	0.018	0.52
C2C4B	C2 calcium-dependent domain-containing protein 4B	A6NLJ0	-0.53	0.692555	0.0038	0.23
CD28	T-cell-specific surface glycoprotein CD28	P10747	-0.52	0.697372	0.0044	0.24
DAF	Complement decay-accelerating factor, CD55	P08174	-0.51	0.700672	0.00540	0.25223
FABPL	Fatty acid-binding protein, liver	P07148	-0.51	0.702222	0.012	0.43
PROLIFERATIVE MENSTRUAL PHASE						
Protein abbreviation	**Protein Full Name**	**Uniprot ID**	**logFC**	**FC**	**p-value**	**adj.p-val**
TYRO3	Tyrosine-protein kinase receptor	Q06418	1.09	2.25	0.002864	0.231156
TOP1	DNA topoisomerase 1	P11387	1.05	2.18	0.016278	0.429842
ICOS	Inducible T-cell costimulator	Q9Y6W8	0.84	1.86	0.010292	0.360623
RN141	RING finger protein 141	Q8WVD5	0.75	1.74	0.000212	0.069074
CSF3	Granulocyte colony-stimulating factor	P09919	0.74	1.73	0.002918	0.231156
FGF4	Fibroblast growth factor 4	P08620	0.72	1.71	0.008054	0.33349
ULBP1	UL16-binding protein 1	Q9BZM6	0.71	1.69	0.003365	0.245555
TNFB	Lymphotoxin-alpha	P01374	0.70	1.68	0.032361	0.510999
ERBB3	Receptor tyrosine-protein kinase erbB-3	P21860	0.64	1.61	0.015696	0.429842
SMUF1	E3 ubiquitin-protein ligase SMURF1	Q9HCE7	0.62	1.58	0.005909	0.329705
SMAD7	Mothers against decapentaplegic homolog 7	O15105	0.59	1.55	0.002633	0.228419
ASNS	Asparagine synthetase [glutamine-hydrolyzing]	P08243	0.57	1.53	0.046593	0.605458
CD4	T-cell surface glycoprotein CD4	P01730	0.56	1.52	0.014497	0.419263
RN141	RING finger protein 141	Q8WVD5	0.55	1.50	0.000361	0.082273
MK08	Mitogen-activated protein kinase 8	P45983	0.54	1.49	0.009216	0.344338
SEP15	Selenoprotein F	O60613	0.51	1.46	0.029879	0.504069
BLNK	B-cell linker protein	Q8WV28	-0.51	0.68	0.005169	0.329705
MMP1	Interstitial collagenase	P03956	-0.51	0.68	0.018353	0.445853
DAND5	DAN domain family member 5	Q8N907	-0.51	0.68	0.022762	0.455168

BID	BH3-interacting domain death agonist	P55957	-0.51	0.68	0.024211	0.455168
BMF	Bcl-2-modifying factor	Q96LC9	-0.52	0.68	0.000795	0.120637
IL25	Interleukin-25	Q9H293	-0.52	0.68	0.005581	0.329705
FGF23	Fibroblast growth factor 23	Q9GZV9	-0.53	0.67	0.037835	0.555935
IL5	Interleukin-5	P05113	-0.53	0.67	0.040623	0.566374
CD5	T-cell surface glycoprotein CD5	P06127	-0.53	0.67	0.04419	0.587694
IRF4	Interferon regulatory factor 4	Q15306	-0.54	0.67	0.006334	0.329705
CEAM7	Carcinoembryonic antigen-related cell adhesion molecule 7	Q14002	-0.54	0.67	0.009578	0.349011
BGLR	Beta-glucuronidase	P08236	-0.54	0.67	0.022315	0.455168
1433B	14-3-3 protein beta/alpha	P31946	-0.55	0.66	0.012148	0.390734
KPCG	Protein kinase C gamma type	P05129	-0.55	0.66	0.016945	0.434598
PSA2	Proteasome subunit alpha type-2	P25787	-0.55	0.66	0.032815	0.510999
CD53	Leukocyte surface antigen CD53	P19397	-0.56	0.66	0.006555	0.33099
GRP	Gastrin-releasing peptide	P07492	-0.56	0.66	0.011694	0.387404
TNR5	Tumor necrosis factor receptor superfamily member 5	P25942	-0.56	0.66	0.018041	0.444205
CXL16	C-X-C motif chemokine 16	Q9H2A7	-0.57	0.66	0.001841	0.186346
PGK1	Phosphoglycerate kinase 1	P00558	-0.58	0.65	0.016798	0.434598
IL17C	Interleukin-17C	Q9P0M4	-0.59	0.65	0.008499	0.344097
ICAM3	Intercellular adhesion molecule 3	P32942	-0.59	0.65	0.00926	0.344338
ETS1	Protein C-ets-1	P14921	-0.59	0.65	0.025355	0.461959
IL19	Interleukin-19	Q9UHD0	-0.60	0.64	0.000175	0.069074
HBEGF	Proheparin-binding EGF-like growth factor	Q99075	-0.60	0.64	0.006903	0.33099
OX2G	OX-2 membrane glycoprotein	P41217	-0.60	0.64	0.009035	0.344338
CRTAM	Cytotoxic and regulatory T-cell molecule	O95727	-0.60	0.64	0.039634	0.566374
I13R2	Interleukin-13 receptor subunit alpha-2	Q14627	-0.61	0.64	0.021524	0.455168
TGFA	Protransforming growth factor alpha	P01135	-0.61	0.64	0.023683	0.455168
IL33_MOUSE	Interleukin-33	Q8BVZ5	-0.62	0.63	0.007876	0.33349
CCL4	C-C motif chemokine 4	P13236	-0.62	0.63	0.031859	0.510999
CASP3	Caspase-3	P42574	-0.63	0.63	0.003504	0.245555
IL1RA	Interleukin-1 receptor antagonist protein	P18510	-0.64	0.62	0.007418	0.33349
PD1L1	Programmed cell death 1 ligand 1	Q9NZQ7	-0.65	0.62	0.007569	0.33349
S10A2	Protein S100-A2	P29034	-0.66	0.61	0.006288	0.329705
CYTB	Cystatin-B	P04080	-0.67	0.61	0.027167	0.47141
CD9	CD9 antigen	P21926	-0.68	0.60	0.000227	0.069074
HMGA1	High mobility group protein HMG-I/HMG-Y	P17096	-0.68	0.60	0.000725	0.120011
CADH3	Cadherin-3	P22223	-0.68	0.60	0.017739	0.442739
SPIT1	Kunitz-type protease inhibitor 1	O43278	-0.69	0.60	0.00149	0.159746
AGRP	Agouti-related protein	O00253	-0.70	0.59	0.01087	0.37346
DDB2	DNA damage-binding protein 2	Q92466	-0.72	0.59	0.014364	0.419263

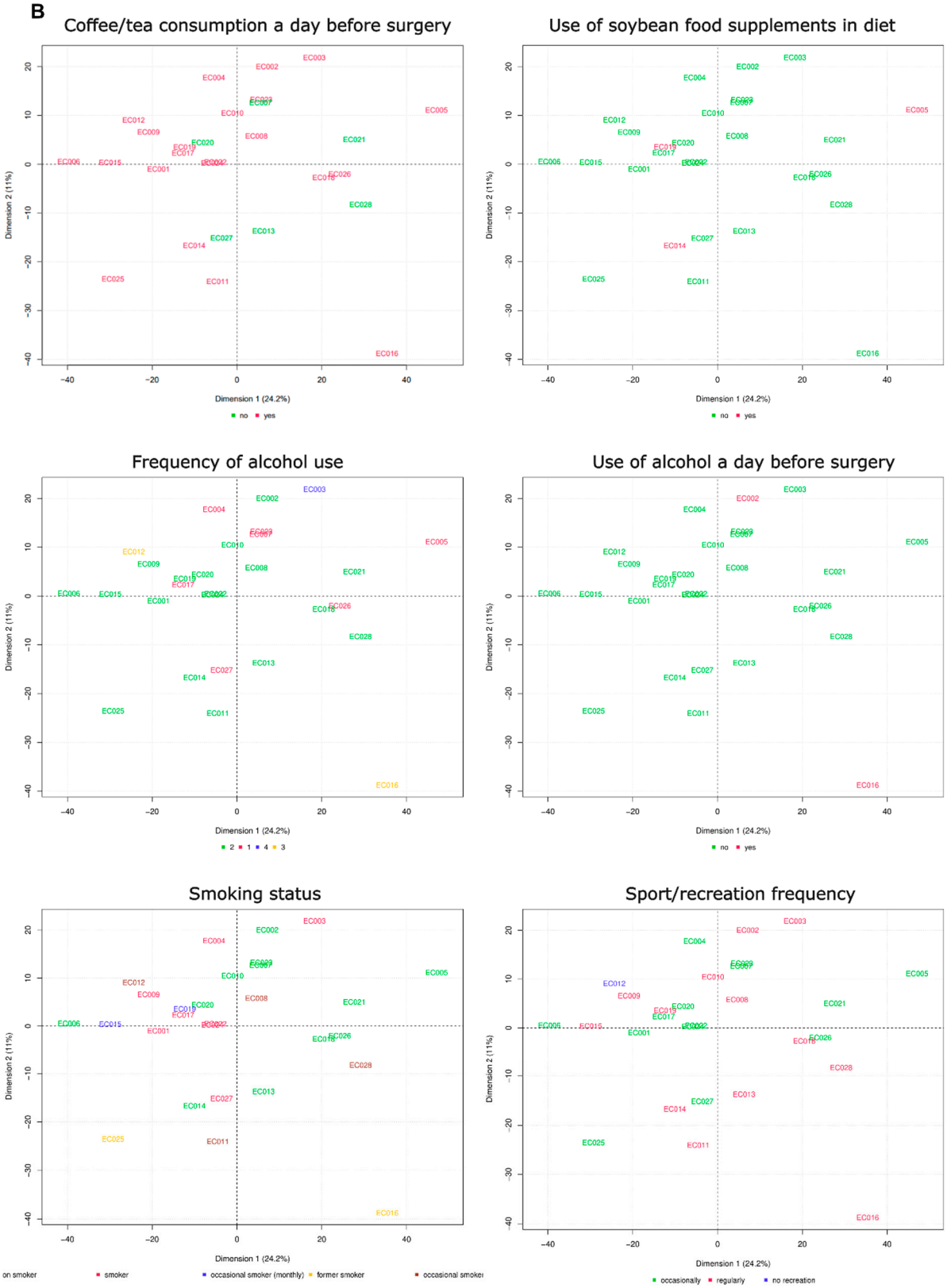
ADA15	Disintegrin and metalloproteinase domain-containing protein 15	Q13444	-0.74	0.58	0.002307	0.221183
TRML1	Trem-like transcript 1 protein	Q86YW5	-0.74	0.58	0.005315	0.329705
NTF4	Neurotrophin-4	P34130	-0.74	0.58	0.006056	0.329705
TNR18	Tumor necrosis factor receptor superfamily member 18	Q9Y5U5	-0.77	0.56	0.020822	0.455168
TNF6B	Tumor necrosis factor receptor superfamily member 6B	O95407	-0.77	0.56	0.024232	0.455168
TNFL6	Tumor necrosis factor ligand superfamily member 6	P48023	-0.79	0.56	0.005075	0.329705
TNR18	Tumor necrosis factor receptor superfamily member 18	Q9Y5U5	-0.80	0.55	0.006792	0.33099
CLD1	Claudin-1	O95832	-0.80	0.55	0.016218	0.429842
KIT	Mast/stem cell growth factor receptor Kit	P10721	-0.82	0.54	0.007886	0.33349
VTDB	Vitamin D-binding protein	P02774	-0.84	0.54	0.034213	0.510999
MIF	Macrophage migration inhibitory factor	P14174	-0.94	0.50	0.000902	0.126351
I18BP	Interleukin-18-binding protein	O95998	-0.97	0.49	0.000542	0.098827
CALB1	Calbindin	P05937	-0.97	0.49	0.023434	0.455168
LEP	Leptin	P41159	-1.06	0.46	0.000471	0.095348
PGH2	Prostaglandin G/H synthase 2	P35354	-1.34	0.37	0.001115	0.145082
CEBPA	CCAAT/enhancer-binding protein alpha	P49715	-1.37	0.36	0.000279	0.07255
EDN1	Endothelin-1	P05305	-1.75	0.27	0.003407	0.245555

Abbreviations: FC, fold change calculated from logFC; logFC, logaritmic fold change calculated on the basis of 2; adj.p-val, p-values adjusted for multiple testing

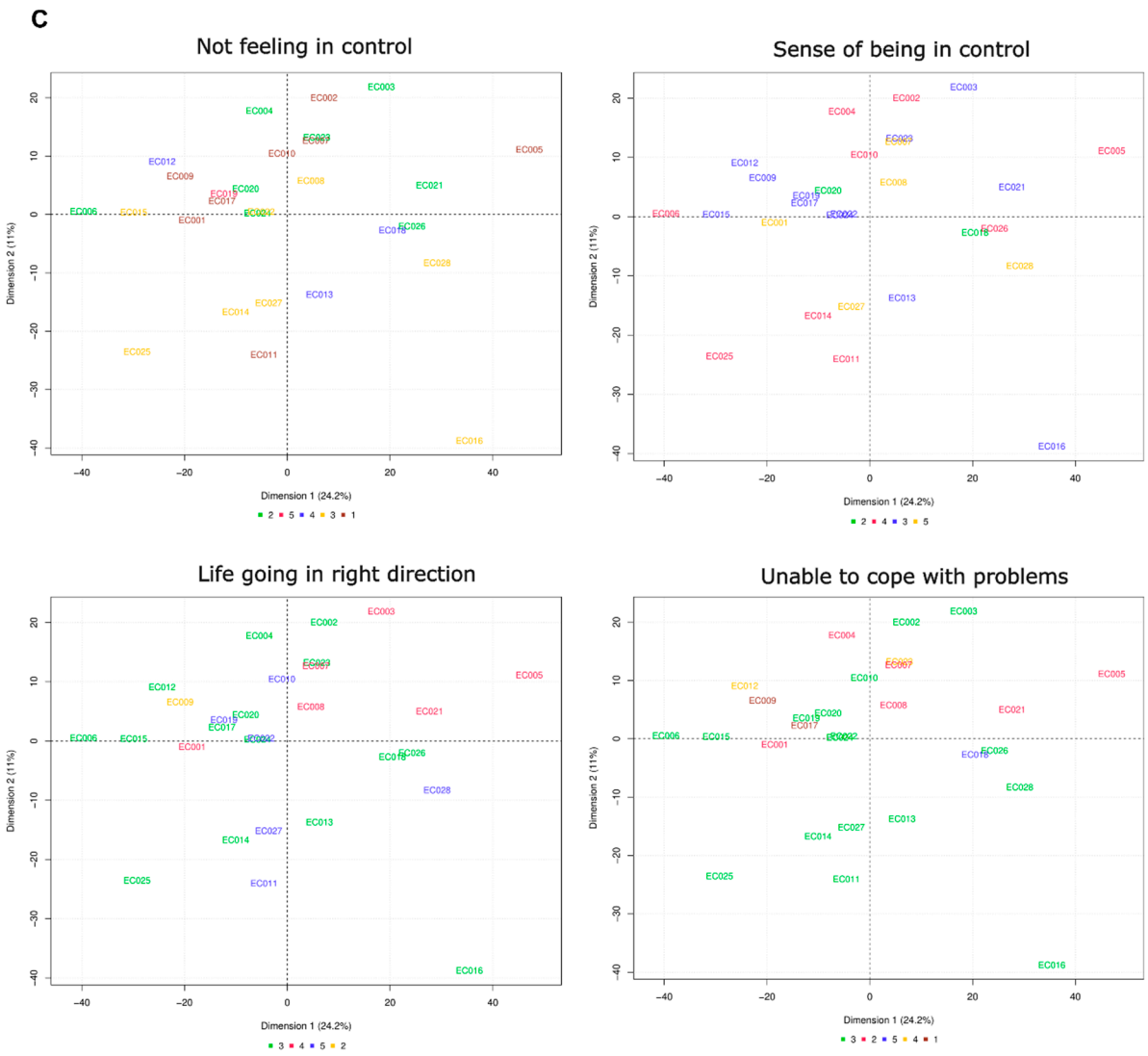
A


Age over 30
Use of oral contraception 3 month before surgery
Use of hormonal therapy 3 month before surgery
Use of medicines a week before surgery
Length of menstrual cycle
Length of menstruation
Dimension 1 (24.2%)
Dimension 2 (11%)
younger
older
no
yes
long
medium
short

B



Legend: 1 - Never, 2-Rarely, 3-Once a week, 4- Two to three times a week, 5- More than 3 times a week



Legend: 1 - Never, 2-Almost never, 3-Sometimes, 4-Quite often, 5- Very often

Figure S1. PCA analysis based on complete array data and different patient characteristics . A) gynecological characteristics B) diet and lifestyle characteristics and C) impact of stress. The presented data are for the secretory group.

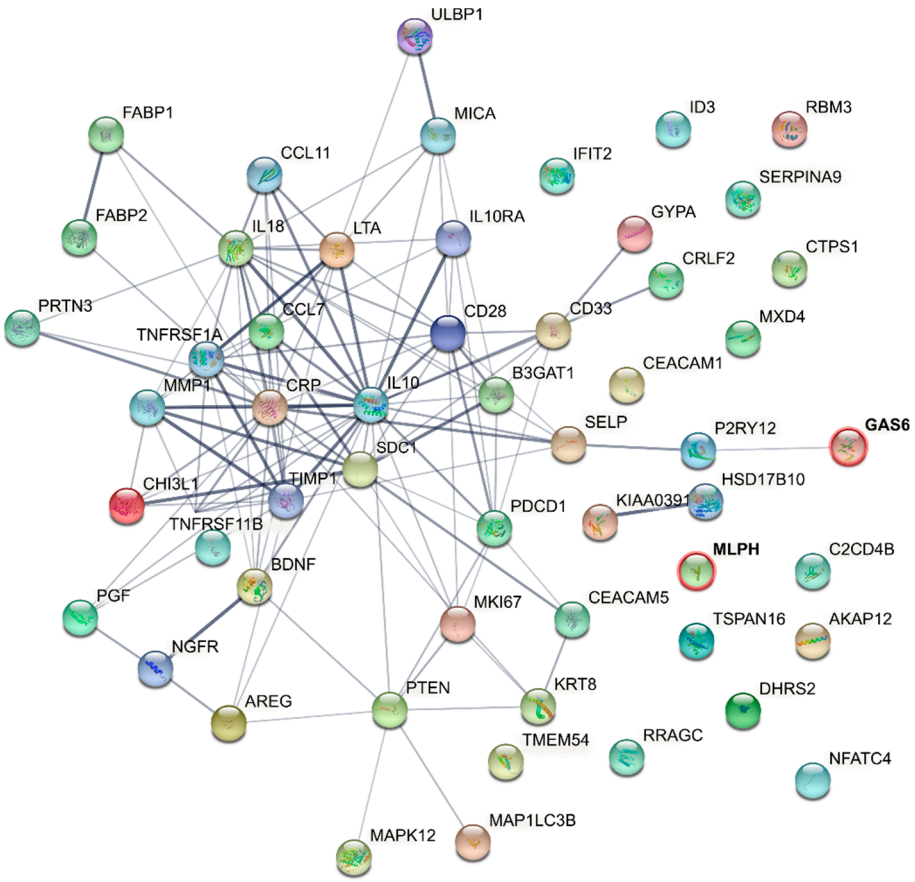


Figure S2. Interactions of the identified differential proteins between patients with peritoneal endometriosis and controls patients in the secretory group. The network includes proteins that reached difference between cases and controls based on log FC > 0.5 and unadjusted $p < 0.05$. The confidence score threshold was set at 0.4 (medium). The figure was acquired online at http://string-db.org/, accessed on January 18 2022 [28].

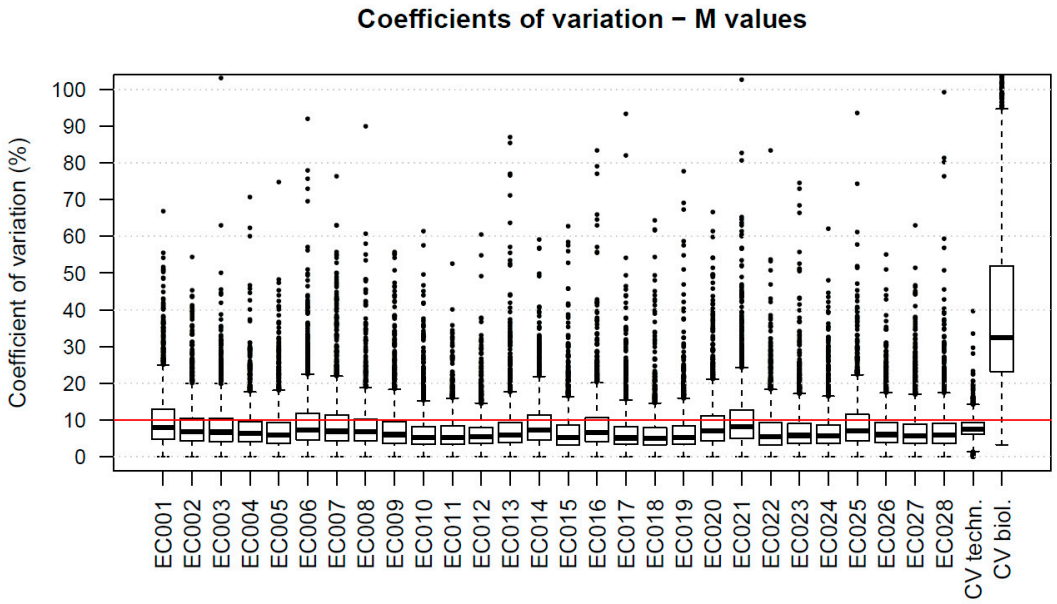


Figure S3. Array-specific distributions of coefficients of variation (CV) for the four technical replicates measured by each antibody. The two rightmost columns represent the average technical variation, i.e. the distribution of the antibody-specific CVs over all arrays (CV techn.), and the biological variation across all samples (CV biol.), respectively.